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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,544	02/23/2004	George Athanasios Aggidis	04-40092-US	7766
7066	7590	03/13/2006	EXAMINER	
REED SMITH LLP 2500 ONE LIBERTY PLACE 1650 MARKET STREET PHILADELPHIA, PA 19103			EDGAR, RICHARD A	
			ART UNIT	PAPER NUMBER
			3745	

DATE MAILED: 03/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/784,544

Applicant(s)

AGGIDIS ET AL.

Examiner

Richard Edgar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/21/2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Great Britain on February 28, 2003. It is noted, however, that applicant has not filed a certified copy of the 0304556.4 application as required by 35 U.S.C. 119(b).

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plurality of impeller elements being discrete members that are secured to the body member by positive fixing means (claim 4); the wedging means comprising at least one separable member interposed between the another abutment means and the locating means (claim 10); and the separable connecting member comprising the axle element (claim 18) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "25" has been used to designate both "a radially inward directed surface" (FIG. 3) and "an annular element" (FIG. 2).

The drawings are objected to because:

1. The views must be preceded by the abbreviation "FIG." (37 CFR 1.84(u)(1)).

2. The view numbers must be larger than the numbers used for reference characters (37 CFR 1.84(u)(2)).
3. Reference characters not mentioned in the description shall not appear in the drawings (37 CFR 1.84(p)(5)). See numeral "3" in FIG. 1.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

Applicant is reminded of the proper language and format for an abstract of the disclosure.

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The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of **50 to 150 words**. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Objections

Claims 14 and 21 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claims not been further treated on the merits.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 7-9, 11-17, 19-22 are rejected under 35 U.S.C. 102(b) as being anticipated by United States Patent No. 924,544 (Eckart hereinafter).

Eckart shows a turbine rotor having an axis of rotation, the wheel inherently mounted on an axle, a plurality of individual radial body members (see FIG. 3) carrying more than one integral impeller elements, and wherein the plurality of radial body members are secured to the wheel; each radial body member having leading and trailing radial abutment surfaces (see FIG. 2) relative to the rotation direction of the rotor that contact with the respective radial abutment surfaces of adjacent radial body members, each radial body member further comprising another abutment means (see FIG. 4), the turbine rotor further comprising locating means in engagement with the another abutment means, and wedging means which is tapered in the radial direction relative to the rotation axis and which acts between the abutment means and the locating means, and further comprising means acting via said wedging means to draw the radial body members radially inwards resisted only by contact of the respective adjacent leading and trailing radial abutment surfaces of the body members. See Figure 1 below.

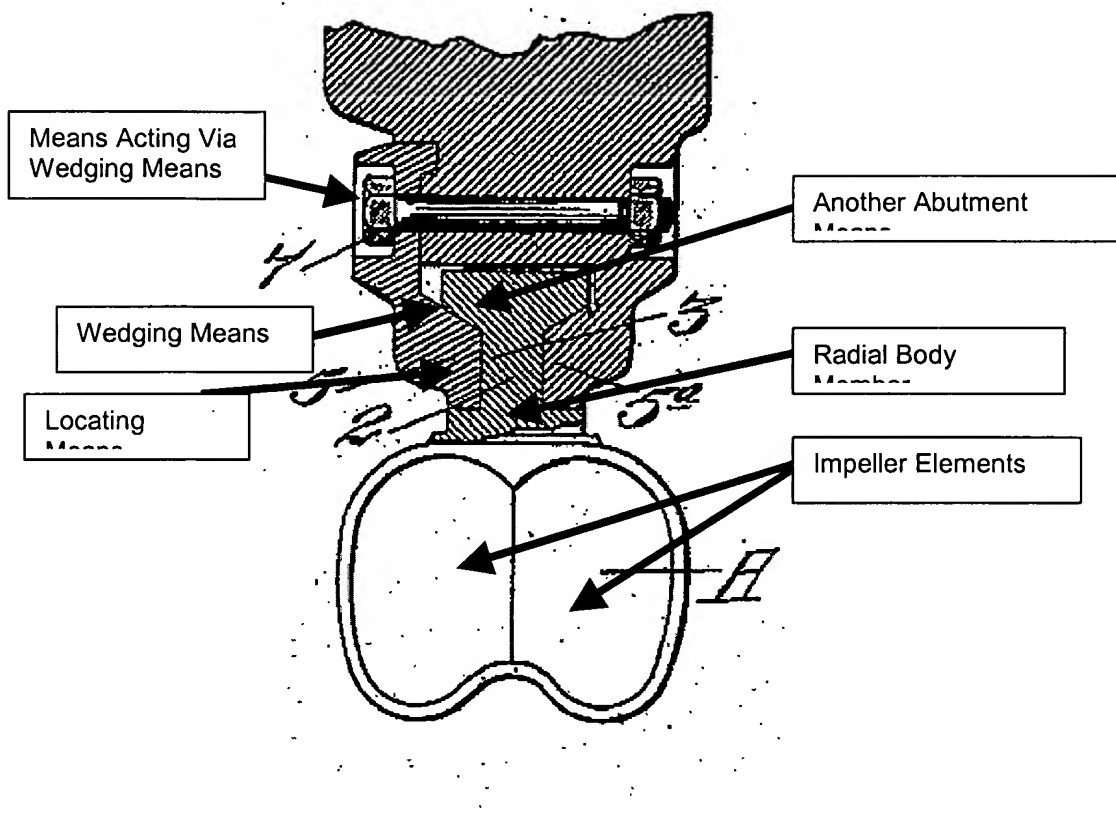


Figure 1

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 924,544 (Eckart hereinafter) as applied to claim 2 above.

Eckart shows the impeller elements integral with the body member and therefore not separable.

If it were considered desirable for any reason to access the end of the body member to which the impeller elements are made integral, it would be obvious to make the impeller elements removable for that purpose. *In re Dulberg*, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961).

Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 924,544 (Eckart hereinafter) as applied to claim 1 above, and further in view of German patent application DE 39 38 357 A1 (Buchelt hereinafter).

Eckart shows the abutment surfaces not on a radial line with the rotational axis.

Buchelt show Pelton abutment surfaces in FIGs. 3 and 6 being arranged along the radial line including the rotational axis for the purpose of damping rotational vibratory stresses.

Since Eckart is a Pelton wheel with abutment surfaces between adjacent buckets, and Buchelt teaches to make the buckets so the abutment surfaces are on a radial line the rotational axis, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the configuration of the Eckart abutment surfaces to extend along the radial line, as taught by Buchelt for the purpose of damping rotational vibratory stresses.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 924,544 (Eckart hereinafter) as applied to claim 1 above, and further in view of

Eckart shows the wedging member being a tapered locating portion, and therefore not a separate member.

If it were considered desirable for any reason to access the portion of the locating means to which the wedging means is made integral, it would be obvious to make the wedging means removable for that purpose. *In re Dulberg*, 289 F.2d 522, 523, 129 USPQ 348, 349 (CCPA 1961).

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 924,544 (Eckart hereinafter) as applied to claim 17 above, and further in view of

Eckart teaches the axle being separable from the connecting member, and not the same piece.

The use of a one-piece construction instead of the structure disclosed in Eckart would be merely a matter of obvious engineering choice. *In re Larson*, 340 F.2d 965, 968, 144 USPQ 347, 349 (CCPA 1965).

Contact Information

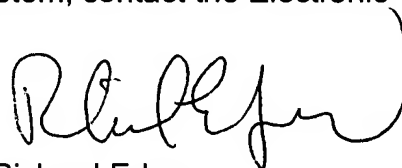
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard Edgar whose telephone number is (571) 272-

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4816. The examiner can normally be reached on Mon.-Thur. and alternate Fri., 7 am- 5 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Look can be reached on (571) 272-4820. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Richard Edgar
Examiner
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RE